

IN THE CLAIMS:

All pending claims are set forth below. Cancelled and withdrawn claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with strikethrough. The status of each claim is indicated with one of (original), (currently amended), (previously amended), (cancelled), (withdrawn), (new), (previously added), (reinstated - formerly claim #), (previously reinstated), (re-presented - formerly dependent claim #), or (previously re-presented).

Please CANCEL claims 2, 3, 7, 8, 11-14, 17, 18, 22, 23, and 26-29.

Please AMEND claims 1, 4-6, 9, 10, 15, 16, 19-21, 24, 25, and 30 in accordance with the following:

1. (CURRENTLY AMENDED) A printer outputting a plurality of types of receiving and printing print data corresponding to one or more images to be printed on one page, the print data being received from a host computer and comprising a plurality of different types of data, each of the types of print data having an attribute identifying the type of print data, the attribute comprising one of a first kind of attribute and a second kind of attribute and being designated by a host computer, said the printer comprising:

a separation unit separating the print data into separate sets of data according to the different types of data;

an image buffer having a plurality of storage locations, each storage location and storing each one type of print data, one by one, in a different one of the storage locations according to one of the first kind of attribute and the second kind of attribute of each type of print data;

a storage unit storing each separate set of data in a different one of the storage locations of the image buffer;

a plurality of video interfaces, each of said video interfaces independently reading one of the types of print a respective one of the separate sets of data stored in a corresponding storage location of said the image buffer;

a print data integration circuit integrating the plurality of types of print separate sets of data read by said the video interfaces to be printed on one page; and

an output mechanism outputting the integrated print data on one page.

2. (CANCELLED)

3. (CANCELLED)

4. (CURRENTLY AMENDED) A The printer according to Claim 3claim 1, further comprising:

a plurality of image processing circuits, each of said the image processing circuits applying an image process to the type of print separate set of data read by a corresponding one of said the video interfaces.

5. (CURRENTLY AMENDED) A The printer according to Claimclaim 1, wherein the plurality of types of print separate sets of data stored in said the image buffer are obtained by dividing the print data, corresponding to the image to be printed on one page, into a plurality of bands, each of the bands corresponding to one of the first kind of attribute and the second kind of attribute different types of data, and wherein said the print data integration circuit alternately selects the print separate set of data read by each of said the video interfaces and outputs the selected print set of data to said the output mechanism.

6. (CURRENTLY AMENDED) A controller controlling a printer to output plurality of types of print data to be printed on one page, the print data being received from a host computer and comprising a plurality of different types of data, each of the types of print data having an attribute identifying the type of print data, the attribute comprising one of a first kind of attribute and a second kind of attribute and being designated by a host computer, said the controller comprising:

a separation unit separating the print data into separate sets of data according to the different types of data;

a storage unit storing each separate set of data in a different one of a plurality of storage locations of an image buffer according to the different types of data;

a plurality of video interfaces, each of said video interfaces independently reading one of the types of print a respective one of the separate sets of data stored in a corresponding one of

~~a plurality of storage locations of an image buffer according to one of the first kind or attribute and the second kind of attribute of each type of print data; and~~

~~a print data integration circuit integrating the plurality of types of print separate sets of data read by said the video interfaces to be printed on one page.~~

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7. (CANCELLED)

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8. (CANCELLED)

9. (CURRENTLY AMENDED) ~~A-The controller according to Claim 8~~claim 6, further comprising:

a plurality of image processing circuits, each of said the image processing circuits applying an image process to the type of printseparate set of data read by a corresponding one of said the video interfaces.

10. (CURRENTLY AMENDED) ~~A-The controller according to Claim 8~~claim 6, wherein the plurality of types of printseparate sets of data stored in said the image buffer are obtained by dividing the print data, corresponding to the image to be printed on one page, into a plurality of bands, each of the bands corresponding to one of the first kind of attribute and the second kind of attributedifferent types of data, and wherein said the print data integration circuit alternately selects the printseparate set of data read by each of said the video interfaces and outputs the selected printset of data to said the output mechanism.

11. (CANCELLED)

12. (CANCELLED)

13. (CANCELLED)

14. (CANCELLED)

(b) (1)

15. (CURRENTLY AMENDED) A method of processing a plurality of types of print data according to an attribute of each type of print data, the attribute identifying the type of print data, the attribute comprising one of a first kind of attribute and a second kind of attribute and being explicitly designated by a host computer, and the print data to be printed on one page, the print data being received from a host computer and comprising a plurality of different types of data, the method comprising:

separating the types of print data corresponding to an image with text into a type of print data corresponding to the image as the first kind of attribute and a type of print data corresponding to the text as the second kind of attribute into separate sets of data according to the different types of data;

storing each of the types of separated print separate set of data in a different storage location according to one of the first kind of attribute and the second kind of attribute of each type of the separated print data;

reading each one of the plural types of stored print separate sets of data;
applying a different image process to each one of the read plural types of stored print separate sets of data, and
outputting the processed print data on one page.

16. (CURRENTLY AMENDED) An image forming apparatus outputting a plurality of types of receiving and forming form data corresponding to one or more images to be formed on one page, the form data being received from a host computer and comprising a plurality of different types of data, each of the types of form data having an attribute identifying the type of print data, the attribute comprising one of a first kind of attribute and a second kind of attribute and explicitly designated by a host computer, said the image forming apparatus comprising:

a separation unit separating the form data into separate sets of data according to the different types of data;

an image buffer having a plurality of storage locations, each storage location and storing each one type of form data, one by one, in a different one of the storage locations according to one of the first kind of attribute and the second kind of attribute of each type of form data;

a storage unit storing each separate set of data in a different one of the storage locations of the image buffer;

~~a plurality of video interfaces, each of said video interfaces independently reading one of the types of form a respective one of the separate sets of data stored in a corresponding storage location of said the image buffer;~~

~~a form data integration circuit integrating the plurality of types of form separate sets of data read by said the video interfaces to be formed on one page; and~~

~~an output mechanism outputting the integrated form data on one page.~~

~~17. (CANCELLED)~~

~~18. (CANCELLED)~~

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~~19. (CURRENTLY AMENDED) An-The image forming apparatus according to claim 1816, further comprising:~~

~~a plurality of image processing circuits, each of said the image processing circuits applying an image process to the type of form separate set of data read by a corresponding one of said the video interfaces.~~

~~20. (CURRENTLY AMENDED) An-The image forming apparatus according to claim 16, wherein the plurality of types of form separate sets of data stored in said the image buffer are obtained by dividing the form data, corresponding to the image to be formed on one page, into a plurality of bands, each of the bands corresponding to one of the first kind of attribute and the second kind of attribute different types of data, and wherein said the form data integration circuit alternately selects the form separate set of data read by each of said the video interfaces and outputs the selected form set of data to said the output mechanism.~~

~~21. (CURRENTLY AMENDED) A controller controlling a-an image forming apparatus to output plurality of types of form data to be formed on one page, the form data being received from a host computer and comprising a plurality of different types of data, each of the types of form data having an attribute identifying the type of print data, the attribute comprising one of a first kind of attribute and a second kind of attribute and being explicitly designated by a host computer, said the controller comprising:~~

a separation unit separating the form data into separate sets of data according to the different types of data;

a storage unit storing each separate set of data in a different one of a plurality of storage locations of an image buffer according to the different types of data;

a plurality of video interfaces, each of said video interfaces independently reading one of the types of form a respective one of the separate sets of data stored in a corresponding one of a the plurality of storage locations of an the image buffer according to one of the first kind of attribute and the second kind of attribute of each type of form data; and

a form data integration circuit integrating the plurality of types of form separate sets of data read by said the video interfaces to be formed on one page.

22. (CANCELLED)

23. (CANCELLED)

24. (CURRENTLY AMENDED) A The controller according to claim 2321, further comprising:

a plurality of image processing circuits, each of said the image processing circuits applying an image process to the type of form separate set of data read by a corresponding one of said the video interfaces.

25. (CURRENTLY AMENDED) A The controller according to claim 21, wherein the plurality of types of form separate sets of data stored in said the image buffer are obtained by dividing the form data, corresponding to the image to be formed on one page, into a plurality of bands, each of the bands corresponding to one of the first kind of attribute and the second kind of attribute different types of data, and wherein said the form data integration circuit alternately selects the form separate set of data read by each of said the video interfaces and outputs the selected form set of data to said the output mechanism.

26. (CANCELLED)

27. (CANCELLED)

28. (CANCELLED)

29. (CANCELLED)

30. (CURRENTLY AMENDED) A method of processing a plurality of types of form data according to an attribute of each type of form data, the attribute identifying the type of print data, the attribute comprising one of a first kind of attribute and a second kind of attribute and being explicitly designated by a host computer, and the form data to be formed on one page, the form data being received from a host computer and comprising a plurality of different types of data, the method comprising:

separating the types of form data corresponding to an image with text into a type of form data corresponding to the image as the first kind of attribute and a type of form data corresponding to the text as the second kind of attribute into separate sets of data according to the different types of data;

storing each of the types of separated form separate set of data in a different storage location according to one of the first kind of attribute and the second kind of attribute of each type of the separated form data;

reading each one of the plural types of stored form separate sets of data;

applying a different image process to each one of the read plural types of stored form separate sets of data; and

outputting the processed form data on one page.